Debugging ESI Using the ESI Test Server

Akamai Technologies, Inc.
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Running the Debugger

The ESI Development Tool (ESID) provides a way for you to test, view, and debug your web pages containing ESI code.

When used with the ESI Test Server (ETS), you can debug your pages on a test site before deployment or modification.

To run the debugger:

1. When you run the ETS install program or when you reconfigure ETS, turn on the ESI Debugging (ESID) option.

   For information on installing and configuring ETS, see the ESI Test Server Users Guide.

2. Using your browser, simply go to the page(s) you want to debug. If the code runs successfully, you’ll see the normal web page. View the source code and you’ll see the debug report-annotated page source.
The ESID Debug Report

However you run the debugger, the resulting page will include ESID debug report. Using the browser, the debugging section is hidden so that you need view the source code (e.g., choose Source or Page Source on the browser's View menu).

You can see an example resulting page starting on page 7.

The Debugging section contains the following subsections:

- **Enumerated source**: the ESI source code with line numbers prefixed to each line.
- **Environment Variables**: the resulting values for the ESI-supported variables.
- **Syntax messages**: information about any syntax errors found.
- **Evaluation messages**: the results of evaluating the ESI source code.

If you're using ESI nesting—the files you're fetching using ESI contain ESI code to fetch other files—the nested files are also debugged. The debug reports on the nested pages are themselves nested, appearing after the including line in the template page.

For example, in debugging `template.htm`, you might see following:

```
<EnvironmentVariables>
  GEO: country_code=US, region_code=CA, georegion=246, city=SANJOSE, dma=807, pmsa=7400, areacode=408, county=SANTACLAARA, fips=06085, lat=37.3353, long=121.8938, timezone=PST, network=reserved
  HTTP_ACCEPT: image/gif, image/x-xbitmap, image/jpeg, image/pjpeg, */*
  HTTP_ACCEPT_CHARSET:
  HTTP_ACCEPT_ENCODING:
  HTTP_ACCEPT_LANGUAGE:
  HTTP_CONTENT_LENGTH: 50
  HTTP_CONTENT_LOCATION:
  HTTP_CONTENT_TYPE: text/html
  HTTP_COOKIE:
  HTTP_HOST: 127.0.0.2:4567
  HTTP_REFERER:
  HTTP_USER_AGENT: curl/6.2 (i686-pc-linux-gnu) libcurl 6.2
  QUERY_STRING: esifrag=4
  REMOTE_ADDR: 127.0.0.1
  REQUEST_METHOD: GET
  REQUEST_PATH: /akcontrol.jsp
  HTTP_PRAGMA: no-cache
  HTTP_SERVER: WebLogic 6.0 Service Pack 1 03/04/2001 22:05:05 #101616
  HTTP_DATE: Mon, 07 May 2001 18:52:18 GMT
  HTTP_CONNECTION: keep-alive
</EnvironmentVariables>
```
Syntax Messages

If you see a Syntax Messages section in your debug report, the page contains ESI syntax errors; you won’t see it otherwise. These 1xxx series messages deal with ESI syntax only. If the message has to do with ESI processing, it will be a 2xxx Evaluation message, shown in the next section. The syntax messages you may see are as follows:

Table 1: Syntax Error Messages

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>TEXT (n = LINE NUMBER)</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>Line n. Error</td>
<td>A generic or unidentifiable error in an ESI statement.</td>
</tr>
<tr>
<td>1001</td>
<td>Line n. Unrecognized ESI tag</td>
<td>An ESI opening statement is incorrect. For example, “<a href="">esi:xyz...</a>” (“xyz” is not an ESI element).</td>
</tr>
<tr>
<td>1002</td>
<td>Line n. Unrecognized ESI attribute</td>
<td>An attribute, such as “src” in “esi:include src,” is misspelled or otherwise unrecognizable.</td>
</tr>
<tr>
<td>1003</td>
<td>Line n. Unrecognized ESI closing tag</td>
<td>The closing statement is not recognized. For example, you used “<a href="">esi:remove</a>” to open a block, and &lt;/esi:rem&gt; to close it.</td>
</tr>
<tr>
<td>1004</td>
<td>Line n. Badly constructed include tag</td>
<td>For example, &lt;esi:include somefile.htm/&gt;. (The include statement must contain an “src” before the primary object to be fetched.)</td>
</tr>
<tr>
<td>1005</td>
<td>Line n. Illegal character in variable name.</td>
<td>In the <a href="">esi:set</a> tag, the name must be composed of up to 256 alphanumeric characters (A-z, 0-9), and can include underscores (_).</td>
</tr>
<tr>
<td>1006</td>
<td>Line n. Unknown variable type.</td>
<td>The type specified in the <a href="">esi:set</a> was either not known or was misspelled. ESI accepts only type='string'.</td>
</tr>
<tr>
<td>1007</td>
<td>Line n. Missing quotes for string constant.</td>
<td>In the short form of the <a href="">esi:set</a> statement, the string set in the value attribute must be surrounded by quotes.</td>
</tr>
<tr>
<td>1008</td>
<td>Line n. More then one name attribute in a <a href="">esi:set</a> or <a href="">esi:assign</a> tag.</td>
<td>The <a href="">esi:set</a> or <a href="">esi:assign</a> tag accepts only one name.</td>
</tr>
<tr>
<td>1009</td>
<td>Line n. More then one type attribute in a <a href="">esi:set</a> or <a href="">esi:assign</a> tag.</td>
<td>The <a href="">esi:set</a> or <a href="">esi:assign</a> tag accepts only one type.</td>
</tr>
<tr>
<td>1010</td>
<td>Line n. More then one value attribute in a <a href="">esi:set</a> or <a href="">esi:assign</a> tag.</td>
<td>The <a href="">esi:set</a> or <a href="">esi:assign</a> tag accepts only one value.</td>
</tr>
<tr>
<td>1011</td>
<td>Line n. One or more attributes are missing for the <a href="">esi:set</a> or <a href="">esi:assign</a> tag.</td>
<td>The <a href="">esi:set</a> or <a href="">esi:assign</a> tag must be followed by a value.</td>
</tr>
</tbody>
</table>
| 1012   | Line n. Expecting a numerical value for attribute. | A numeric value was expected but not found, for example, with the include statement “maxwait=”.

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The Evaluation messages fall into three categories:

- **Info** messages advise you about general ESI processing.
- **Warning** messages occur when there has been an ESI processing problem but it is not necessarily a serious error that will affect page display.
- **Error** messages represent serious errors that will affect page display.

These 2xxx series messages deal with ESI processing. If the message has to do with ESI syntax, it will be a 1xxx message, shown in the preceding section.

### Table 2: Evaluation Messages

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>TYPE</th>
<th>TEXT (n = LINE NUMBER)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>Info</td>
<td>Line n. All WHEN expressions evaluated FALSE. Processing OTHERWISE block.</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Info</td>
<td>Line n. All WHEN expressions evaluated FALSE. No OTHERWISE block.</td>
<td>In this case, ESI-processing continues as if there were no CHOOSE block.</td>
</tr>
<tr>
<td>2002</td>
<td>Info</td>
<td>Line n. WHEN expression evaluated TRUE.</td>
<td>The line number tells you which WHEN evaluated to true.</td>
</tr>
<tr>
<td>2003</td>
<td>Info</td>
<td>Line n. WHEN expression evaluated FALSE.</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Info</td>
<td>Line n. Your code ran successfully</td>
<td>One of these two messages — 2004 or 2005 — will be the last line in the evaluation section.</td>
</tr>
<tr>
<td>2005</td>
<td>Error</td>
<td>Line n. Your code did not run successfully</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>Warning</td>
<td>Line n. Failed fetching fragment <em>name_of_fragment</em>.</td>
<td>There could be a number of causes: for example, the path or host for the fragment is not specified in your configuration metadata; the file doesn’t exist; or there is a connectivity problem between EdgeSuite and the origin server.</td>
</tr>
<tr>
<td>2007</td>
<td>Info</td>
<td>Line n. Including fragment <em>name_of_fragment</em>.</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Error</td>
<td>Line n. Failed fetching fragment <em>name_of_fragment</em>. Request hit resource boundary.</td>
<td>There are two limits, one or both of which may have been violated: 1) More than 5 levels of nesting (the initial “include” is the first level) 2) More than 50 “include” attempts on one page. The 50 attempts is the sum of the includes on the initial template plus all subsequent associated attempts, such as those on nested pages. The limit includes both “src” and “alt” attempts on any one page. A fetch on the “alt” object is only attempted and counted if the “src” fails. In processing a page, EdgeSuite attempts all “src” objects before attempting to fetch “alt” objects.</td>
</tr>
<tr>
<td>2009</td>
<td>Error</td>
<td>Line n. Failed fetching fragment <em>name_of_fragment</em>. Error in path or host.</td>
<td>The path specified in the code contains illegal characters or other format errors.</td>
</tr>
<tr>
<td>2010</td>
<td>Error</td>
<td>Your code is too big. Your total file size must be less than xx bytes.</td>
<td>The sum of the sizes of files to be fetched and included, including nested objects, exceeds 1 megabyte.</td>
</tr>
<tr>
<td>2011</td>
<td>Info</td>
<td>The document contains no ESI tags.</td>
<td>The file was nominated for ESI parsing by the configuration file or AK-control header metadata, but no ESI tags were found in the file.</td>
</tr>
<tr>
<td>2012</td>
<td>Error</td>
<td>Line n. Bad regular expression “text of bad expression.”</td>
<td>A regular expression was formed incorrectly in the <em>matches</em> operator.</td>
</tr>
</tbody>
</table>
The Debugging Section, not displayed in the normal browser window

This is an ESI contains feature test, using 'has' inside a when tag.

Checking if the user agent contains the combination 'OTH' in it.

Checking if the user cookie contains the combination 'name' somewhere in it.

Checking if the query string contains the combination 'val' somewhere in it.

Checking if the query string value of 'val' contains 'abc' in it.
<esi:when>

<esi:otherwise>

QUERY_STRING('val') does not contain 'abc' <br>
</esi:otherwise>
</esi:choose>
<br>
</body>
</Source>

<EnvironmentVariables>
GEO: country_code=US, region_code=CA, georegion=246, city=SANJOSE, dma=807, pmsa=7400, areacode=408, county=SANPTCLAARA, fips=06085, lat=37.3353, long=121.8938, timezone=PST, network=reserved
HTTP_ACCEPT: image/gif, image/x-xbitmap, image/jpeg, image/pjpeg, */*
HTTP_ACCEPT_CHARSET:
HTTP_ACCEPT_ENCODING:
HTTP_ACCEPT_LANGUAGE:
HTTP_CONTENT_LENGTH: 50
HTTP_CONTENT_LOCATION:
HTTP_CONTENT_TYPE: text/html
HTTP_COOKIE:
HTTP_HOST: 127.0.0.2:4567
HTTP_REFERER:
HTTP_USER_AGENT: curl/6.2 (i686-pc-linux-gnu) libcurl 6.2
QUERY_STRING: esifrag=4
REMOTE_ADDR: 127.0.0.1
REQUEST_METHOD: GET
REQUEST_PATH: /akcontrol.jsp
HTTP_PRAGMA: no-cache
HTTP_SERVER: WebLogic 6.0 Service Pack 1 03/04/2001 22:05:05 #101616
HTTP_DATE: Mon, 07 May 2001 18:52:18 GMT
HTTP_CONNECTION: keep-alive
</EnvironmentVariables>

There were no syntax errors, so there is no syntax error section

Begin Display Code
<html>
<header>
ESI 'contains' feature test
<header>
<body>
This is an ESI contains feature test, using 'has' inside a when tag.

Checking if the user agent contains the combination 'OTH' in it. <br>
<style>.hide {display:none;}</style>
<SPAN class="hide">
/********************Debugging Section********************/
<Debug>
<Source>
1    Just a little file that says OTHER. 
</Source>
</Debug>
/********************End Debugging Section*******************/
</SPAN>

Environment Variables Subsection
<EnvironmentVariables>
HTTP_ACCEPT_LANGUAGE: 
HTTP_COOKIE: first_name=somename;Akamai-UnencDebug=Akamai-DebugValue=On
HTTP_HOST: labamba.akamai.com
HTTP_REFERER: 
HTTP_USER_AGENT: Mozilla/4.0 
QUERY_STRING: 
GEO: 
    country_code=US,region_code=VA,georegion=288,city=HERNDON,dma=511,
pmsa=8840,areacode=703,county=FAIRFAX.fips=51059,lat=38.9696,long=77.3866,timezone=EST,network=reserved
REMOTE_ADDR: 127.0.0.1
</EnvironmentVariables>

Evaluation Subsection
<Eval>
Info[2004]: Your code ran successfully. </Eval>

End Debug
/********************End Debugging Section*******************/
</SPAN>

Begin Display Code
Just a little file that says OTHER. 
<br>
Checking if the user cookie contains the combination 'name' somewhere in it. <br>

HTTP_COOKIE includes 'name': first_name=somename;Akamai-UnencDebug=Akamai-DebugValue=On<br>
<br>
Checking if the query string contains the combination 'val' somewhere in it. <br>

QUERY_STRING does not contain 'val' <br>
<br>
Checking if the query string value of 'val' contains 'abc' in it. <br>

QUERY_STRING['val'] does not contain 'abc' <br>
</body>
<html>